Deploying a Dynamic Infrastructure

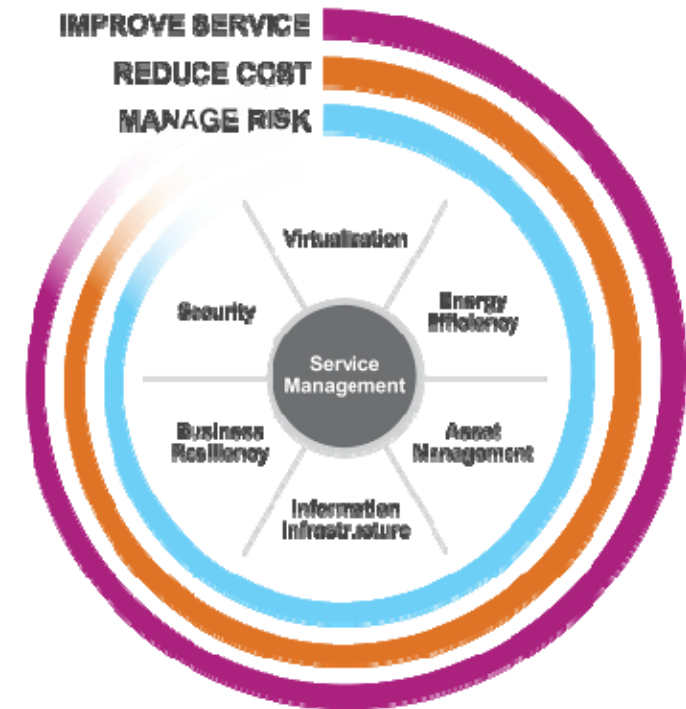Information Infrastructure Priorities, Capabilities and Experiences

Deploying a Dynamic Infrastructure

Information Infrastructure Priorities, Capabilities and Experiences
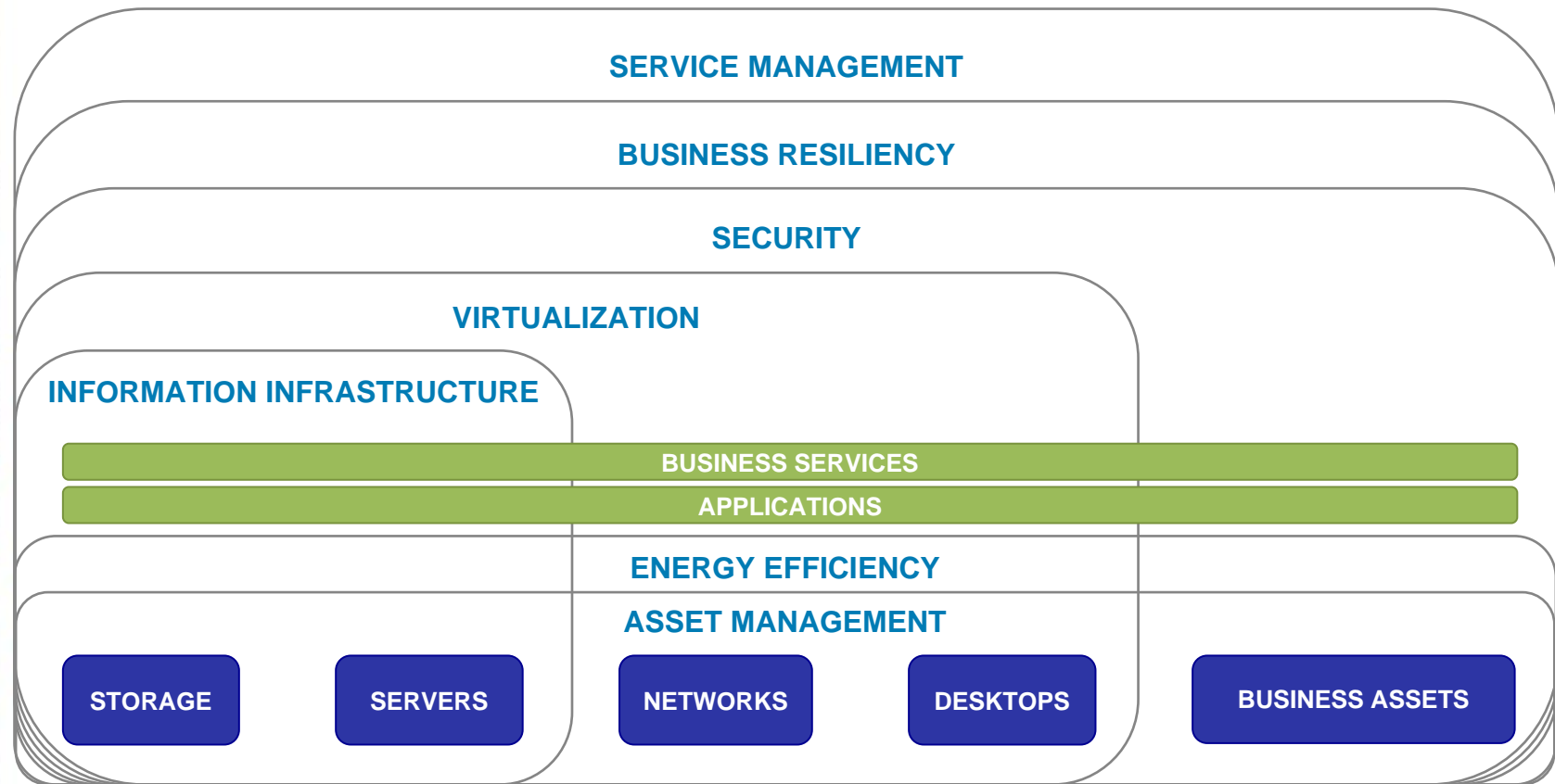
Agenda

- **An overview of Information Infrastructure**

- **How Information Infrastructure is being exploited in the market**

- **How ISM Group applies Information Infrastructure**

- **Business and IT priorities for Information Infrastructure**

- **How IBM is enabling Information Infrastructure with our clients**

- **Current Information Infrastructure capabilities**

- **Customer successes deploying Information Infrastructure**

Information Infrastructure delivers capability for a portion of infrastructure, applications and business services

SERVICE MANAGEMENT

BUSINESS RESILIENCY

SECURITY

VIRTUALIZATION

INFORMATION INFRASTRUCTURE

BUSINESS SERVICES

APPLICATIONS

ENERGY EFFICIENCY

ASSET MANAGEMENT

STORAGE

SERVERS

NETWORKS

DESKTOPS

BUSINESS ASSETS

The Information Challenge

IBM

Enterprise data is exploding (57%CGR), businesses are under pressure to cost efficiently store, protect and manage it

Cost Efficiencies
Globalization
Risk & Compliance
Mergers & Acquisitions

- Many industries require data to be retained more than 50 years
- 80% of this data is now unstructured email, images, videos, documents
- Disruptions from downtime can cost up to 16% of a firm's total revenue

Volume Explosion
Unstructured Data
Multiple Versions
Inaccessible, Untimely

Data Volume

By 2010, the codified information base of the world is expected to double every 11 hours. Data is exploding, & its nature is changing to machine-generated – from sensors, RFID, meters, GPS systems & more

Data Risk

With more than 30 new compliance regulations worldwide, the amount of data that is subject to regulation is growing at 64% per year. More than 60% of IT executives now rate compliance with regulations a top challenge

Data Variety

With the expansion of information comes large variances in the complexion of the available data – 80% of data is now unstructured, contributed largely by email, documents, images and video
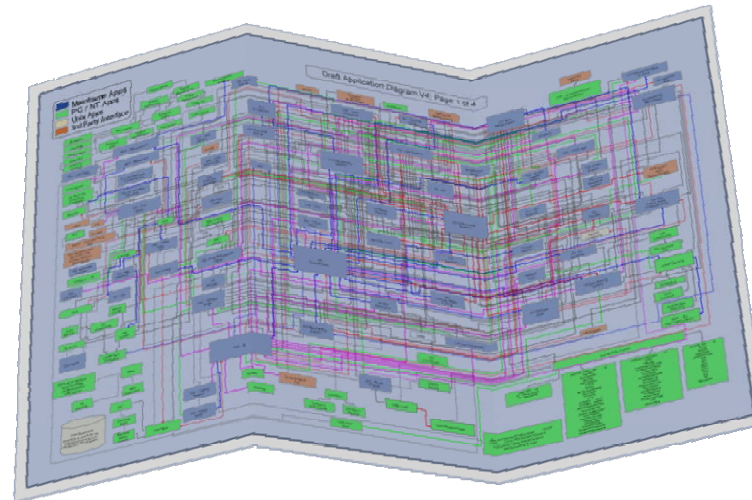
Data Retention

Many industries require certain data to be stored for more than 50 years. But on average 37% of a firm's data is inactive or expired. Storing and archiving this data unnecessarily increases business risk, energy consumption and IT costs

How Do We Leverage Information For Smarter Business Outcomes?

42% of managers use wrong information at least once a week

59% of managers miss information valuable to their jobs because they can't find it

47% of users don't have confidence in their information

Sources: *Accenture Survey, January 2007   AIIM Survey, July/August 2007*

Information Infrastructure Functional Groups

IBM

INFORMATION INFRASTRUCTURE

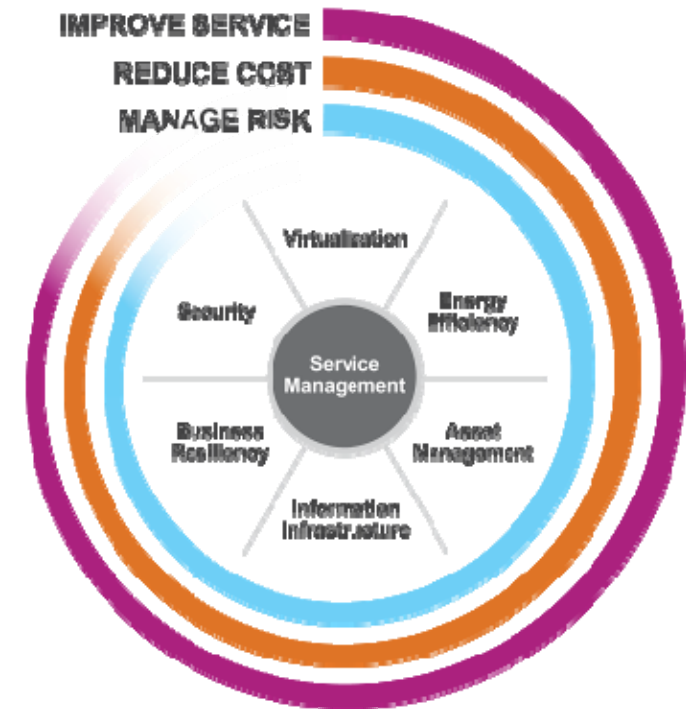| Database / Information	Information Lifecycle	Data Mobility
Compression	Archive & Retention	Copy Services
Structured - RDMS	Data Placement	Partitioning
Unstructured - Enterprise Content Management	Data Classification	
	Deduplication	
	Digital Asset Management	

Deploying a Dynamic Infrastructure
Information Infrastructure Priorities, Capabilities and Experiences

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Why Information Infrastructure?

As firms look to create insight from the explosion of new information available to their business, it is essential for that information to be:

- **Cost-efficiently and securely stored or archived**

- **Made accessible and available to the business where and when its needed**

- **Supporting compliance and retention policies**

IBM brings together a breadth of Information Infrastructure solutions to address these needs, providing the foundation for clients to efficiently and effectively store and manage information and mitigate risks so they can unlock the business value of that information, create new insights and confidently take action.

Manage Risk	Improve Service	Reduce Cost

Information Compliance	Information Security	Information Availability	Information Retention

Deploy a resilient, secure Information Infrastructure to protect, manage and gain insight from information

IBM

Information Availability
How to deliver continuous and reliable access to information?

59% of managers miss data they should have used

Information Security
How to protect and enable secure sharing of information?

84% of security breaches come from internal sources.

Information Retention
How to support our information retention policies?

Some information may need to be kept for up to 100 years

Information Compliance
How to reduce our reputation risks and audit deficiencies?

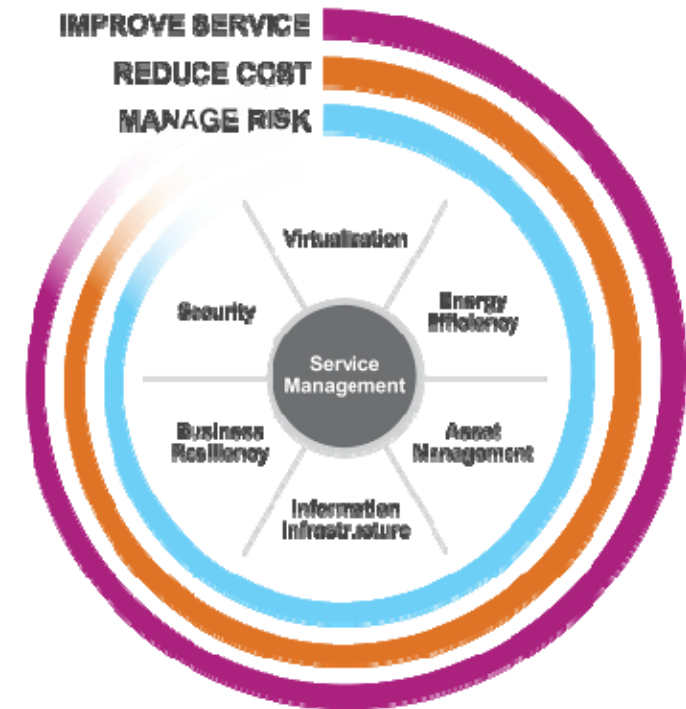**37% of data is expired or inactive**

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IMPROVE SERVICE
REDUCE COST
MANAGE RISK

Virtualization

Security

Energy Efficiency

Service Management

Business Resiliency

Asset Management

Information Infrastructure

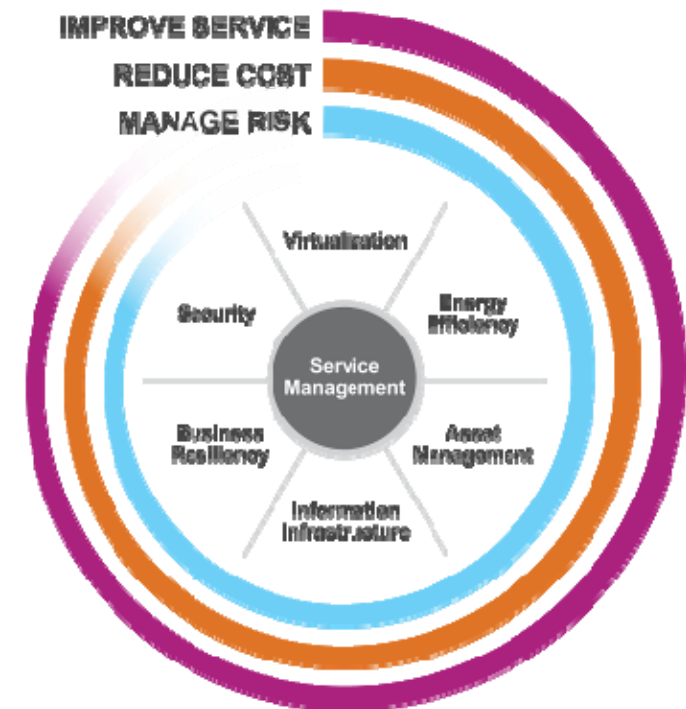# ISM Group: Information Infrastructure

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IMPROVE SERVICE
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Security
Energy Efficiency
Service Management
Business Resiliency
Asset Management
Information Infrastructure

Where does Information Infrastructure rank in your current business priorities?

Select the most appropriate answer:

1. Information Infrastructure is not a focus area for our business
2. Our business views Information Infrastructure as an IT responsibility and allocates basic resources for improvements
3. Our business has an initiative in place to better manage our Information Infrastructure
4. Information Infrastructure is part of our corporate strategy

Where does Information Infrastructure rank in your IT priorities?

Select the most appropriate answer:

1. Information Infrastructure is confusing. We just try to handle things as they happen.

2. We need to be more strategic with Information Infrastructure. We are "fire fighting" implementation in one of the areas out of necessity. None of the others have started planning for solutions.

3. We have a strategy for Information Infrastructure. We have started defining plans across each areas and are in the process of implementing a few of our plans.

4. Information Infrastructure is critical to our IT success. We have implemented our plans and are seeing the results.
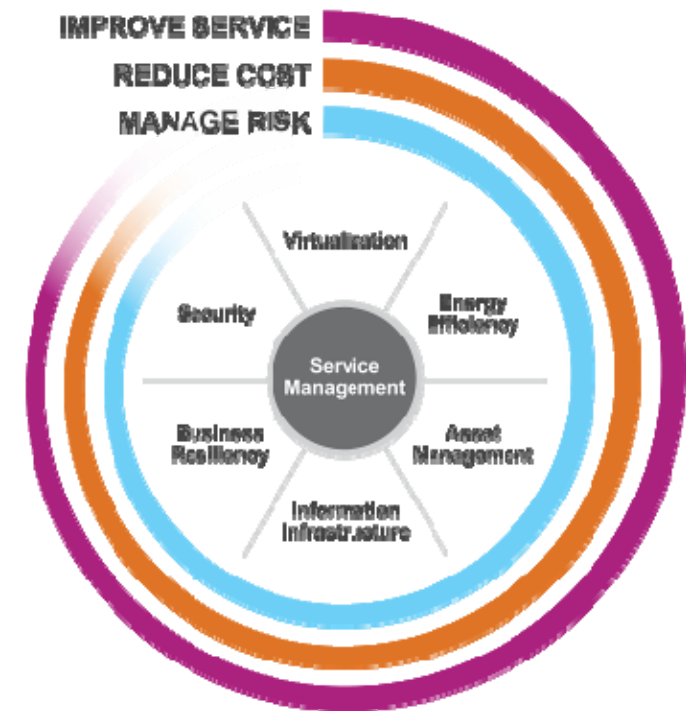
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IBM Information Infrastructure Solutions
Innovative, Integrated, Available Today

IBM and its business partners bring an innovative approach to enable clients to **manage information more effectively and mitigate information risks with a dynamic infrastructure** that efficiently and securely stores, protects and optimizes access to information

Our clients can protect, manage and gain insight from their information with our leading-edge storage and data management products, services and integrated solutions supported by world-class expertise and proven experience

Information Compliance	**Information Availability**	**Information Retention**	**Information Security**
Mitigate information risks	*Deliver continuous access to information*	*Support information retention policies*	*Securely share information*

Information infrastructure offerings and capabilities from IBM

INFORMATION INFRASTRUCTURE OFFERINGS FROM IBM

- Manage storage utilization and complexity, with Tivoli Storage Productivity Center (TPC) and SAN Volume Controller (SVC).
- Preserve information assets and help meet compliance requirements with Content Management solutions from IBM Information Management , Tivoli Storage Manager, DR-550 and soon to be announced archival appliances.
- Improve information security with self encrypting disk storage & tape drives used in our IBM storage systems with keys managed by Tivoli Key Lifecycle Manager
- Leverage information stores more effectively for reporting that includes all the right information from any number of disparate information stores using DB2, Informix, FileNet & Cognos
- Support massively scalable file or cloud-based services, with IBM Storage Optimization and Integration Services – scale out file services

THE IBM DIFFERENCE

- Reducing power, space and cooling costs up to 80 percent with next-generation disk storage and migrate information to the new systems without taking production systems offline.
- Increasing storage utilization by more than 30 percent and save up to 50 percent in administration and management costs with virtualized storage across multivendor systems
- Reducing 25TB of data into 1TB of storage capacity with in-line data deduplication
- Enabling near-instant recovery of Microsoft® Windows servers
- Simplifing data security with the pioneering encrypted disk storage that now includes solid-state drives and more than one petabyte of capacity per disk system
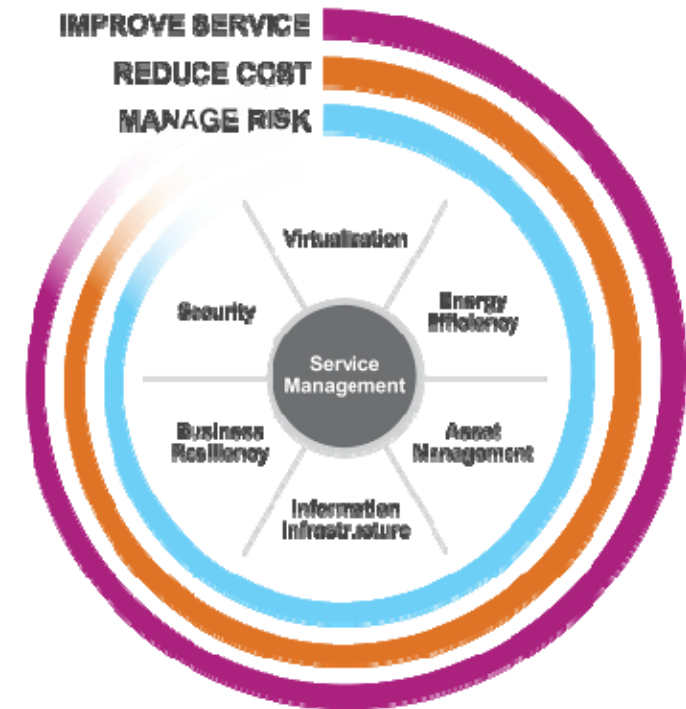
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IMPROVE SERVICE
REDUCE COST
MANAGE RISK

Virtualization

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Service Management

Business Resiliency

Asset Management

Information Infrastructure

Which best describes your current Information Infrastructure?

Select the most appropriate answer:

1. Multiple information managers and tool sets are used, making integration across repositories difficult and expensive.

2. Some integration of structured and unstructured data has been done.

3. Structured and unstructured enterprise information is integrated and supported by rich metadata. Collaboration tools used.

4. The organization has the ability to "discover" internal or external information on specific subject areas without having to know where to search. Extension of knowledge management into collaboration enablement tooling.

Which best describes your current backup data reduction plans?

Select the most appropriate answer:

1. We are too busy trying to get everything backed up to worry about reduction.

2. We have started reducing some of the data at our branches and our data center

3. We implemented some server deduplication software but still seem to have a lot of duplicate data.

4. We are using a number of tools to help reduce our back up stores including HSM, TPC, Incremental Forever backup, client side, server side & in-line appliance deduplication.

Which best describes your current use of data retention capability?

Select the most appropriate answer:

1. Minimal recovery tools and processes.

2. Some archiving tools are used. Processes are mostly manual. A lot of man hours are needed to process the information

3. Well-defined policies for different data categories. Some automation is used. Storage continues to grow as expiration and removal of data is difficult.

4. Well-defined policies for different data categories. Automated systems in place to classify information for compliance and retention. Policies for expiration and deletion are handled automatically by our systems.
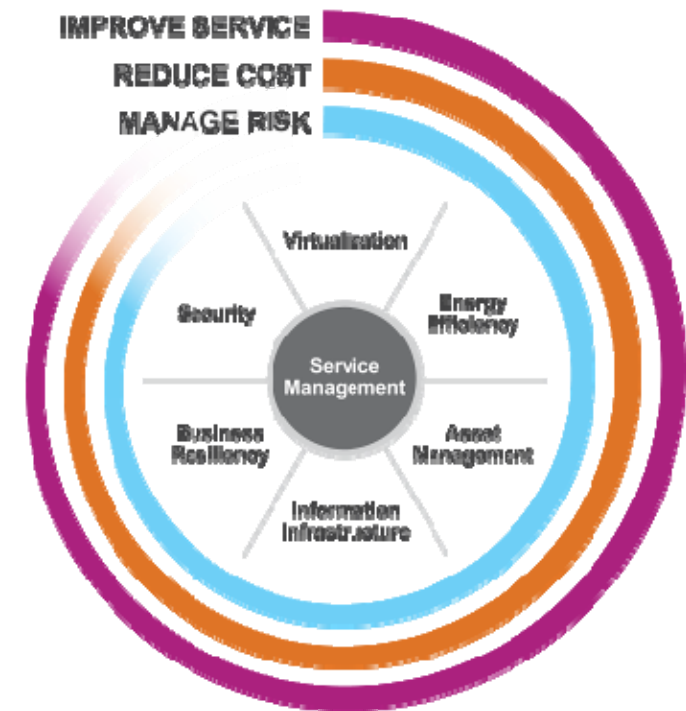
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Hollywood Film Studio

IBM XIV and ProtecTIER Cast in Leading Roles to Improve Information Availability and Information Retention

> ▶ Unreliable tape backups. Backup failures.

> ▶ Running out of data center floor space and power

> ▶ Information growing at 50%/year

> ▶ Must support one of the world's most intensive SAP data warehouses

Solution

- Virtual tape library + deduplication solution; Virtualized disk storage; Virtualized servers.
- Services - IBM Premier Business Partner Direct Systems Support (DSS)
- Storage - Two clustered, dual-node IBM System Storage ProtecTIER TS7650G Data Deduplication Gateways; nine IBM XIV Storage Systems
- Servers - Two IBM Power 595 and four Power 570 servers
- Software - Tivoli Storage Manager

Result

- Common information infrastructure to support SAP, WebSphere and other applications critical to the production, financing, and distribution of theatrical content.
- Deduplication uses familiar VTL technology and interfaces
- Recovery data is readily available and easily accessed
- Reduces floor space and power

Large US Financial Services Company

*IBM Information Infrastructure Improves
Information Compliance*

▷ *Lacked ability to respond rapidly to legal discovery demands
for email*

▷ *30,000 mailboxes, 1.2M daily volume, 750M archived*

▷ *3.5B emails in back up storage – no easy way to search/retrieve*

Solution

- Email archiving, retention and retrieval solution for Enterprise message servers

- Total Solution components:
  - Application Software: CommonStore, eMail Search for CommonStore, SSAM
  - Storage Software: Global Mirror, Flash Copy, SnapLock, TotalStorage Productivity Center
  - Hardware: P570/550 servers; DS8300, DS8100, N series storage systems
  - Services: IBM Global Services

Result

- Ensures compliance with Discovery Orders, avoiding penalties and judgments from inability to produce emails in timely fashion

- Able to search across mailboxes and apply multiple holds to prevent critical email deletion, ensuring email retention for the required duration

- Single instance store to reduce volume of email and attachments in storage

Zappos.com, Inc.
IBM Information Infrastructure Improves Information Availability

- *IT infrastructure was not keeping pace with the company's 100%+ annual revenue growth*
- *Web server deployment took hours*
- *Manual configuration changes took hours*

Solution

- Updated data center
- Technology refresh, servers and storage
- Storage: SVC, DS8300, N series Gateway with Snapshot
- Servers: BladeCenter, POWER6
- Services: Sycomp, an IBM Premier Business Partner

Result

- Now processing approximately 30,000 orders per day, up over 50% in 2008
- Able to deploy new Web servers in 5 minutes, using Snapshot over iSCSI
- Improved systems performance
- Simpler maintenance
- Positioned the company to accommodate continued rapid growth